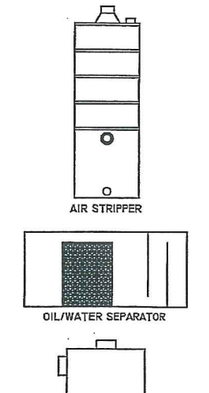
VALVES AND PIPING

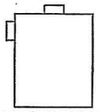
NO NC

BALL VALVE -
GATE VALVE -
GLOBE VALVE -
NEEDLE VALVE -
SLIDE VALVE -
SOLENOID VALVE -
BUTTERFLY VALVE -
SWING CHECK VALVE -
WAFER CHECK VALVE -
SPRING CHECK VALVE -
WYE STRAINER -
SAMPLE PORT -
PRESSURE RELIEF VALVE -
VACUUM RELIEF VALVE -
CAMLOCK CONNECTION -
FERNCO CONNECTION - FERNCO
FLEXIBLE CONNECTION -
FLANGED CONNECTION -
REDUCER -
UNION -
ADSORBENT FILTER - A DRAIN
COALESCING FILTER - DRAIN
PARTICULATE FILTER - DRAIN
FILTER, SILENCER -
PRESSURE REGULATOR -
REGULATOR W/ FILTER -
AIR DRYER- DRAIN

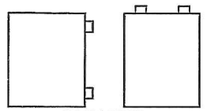
EQUIPMENT

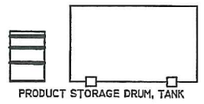

AIR STRIPPER

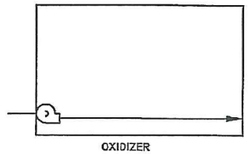
OIL/WATER SEPARATOR


VAPOR/LIQUID, SEAL FLUID SEPARATOR

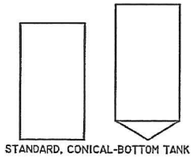

BAG FILTER


CARBON VESSEL


PRODUCT STORAGE DRUM, TANK


OXIDIZER


CHEMICAL DRUM


STANDARD, CONICAL-BOTTOM TANK

EQUIPMENT

CENTRIFUGAL PUMP -
PROGRESSIVE-CAVITY PUMP -
CHEMICAL-INJECTION PUMP -
CENTRIFUGAL, REGENERATIVE BLOWER -
POSITIVE-DISPLACEMENT BLOWER -
ROTARY-CLAW BLOWER -
LIQUID-RING PUMP -
ROTARY-VANE COMPRESSOR -
RECIPROCATING COMPRESSOR -
HEAT EXCHANGER -
PASSIVE COOLING FINS -

EQUIPMENT

AS - AIR STRIPPER
BLD - BUILDING, TRAILER OR SKID
FLT - FILTER VESSEL
LPC - LIQUID-PHASE CARBON VESSEL
MFD - MANIFOLD
OWS - OIL/WATER SEPARATOR
OX - OXIDIZER
PST - PRODUCT STORAGE TANK
SOS - SEAL OIL SEPARATOR
SWS - SEAL WATER SEPARATOR
TNK - TANK
VLS - VAPOR/LIQUID SEPARATOR
VPC - VAPOR-PHASE CARBON VESSEL

FLOW MEASUREMENT

AVERAGING PITOT TUBE - RANGE PDI 101 H L
VENTURI - RANGE PDI 101 H L
ROTOMETER - RANGE FI 101
WATER FLOW METER - FQI 101

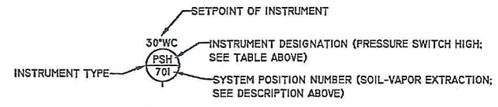
INSTRUMENT DESIGNATION

	INPUT	1ST MODIFIER	2ND MODIFIER	3RD MODIFIER	OUTPUT	1ST MODIFIER	
A			ALARM				A
B						BLOWER	B
C	CYCLE					COMPRESSOR	C
D		DIFFERENTIAL				AIR DRYER	D
E							E
F	FLOW					FAN	F
G	GAS (LEL)		GAUGE				G
H				HIGH	HAND	HEATER	H
I	CURRENT		INDICATOR				I
J							J
K							K
L	LEVEL			LOW			L
M					MOTORIZED		M
N							N
O							O
P	PRESSURE				PNEUMATIC	PUMP	P
Q		QUANTITY					Q
R							R
S	SPEED		SWITCH		SOLENOID		S
T	TEMPERATURE		TRANSMITTER				T
U							U
V						VALVE	V
W							W
X							X
Y							Y
Z	POSITION						Z

INSTRUMENT IDENTIFICATION

- INDICATING INSTRUMENT
- DIGITAL INPUT TO CONTROL PANEL
- DIGITAL INPUT CAUSING ALARM
- ** DIGITAL INPUT CAUSING SYSTEM SHUTDOWN ALARM
- ANALOG INPUT TO CONTROL PANEL
- ANALOG OUTPUT FROM CONTROL PANEL

EXAMPLE



SYSTEM POSITION DESIGNATION

100 - VACUUM INLET MANIFOLD
300 - INLET HEAT EXCHANGER
400 - VAPOR/LIQUID SEPARATOR
500 - VAPOR/LIQUID SEPARATOR - 2
700 - SOIL-VAPOR EXTRACTION
1000 - LIQUID-RING PUMP
1300 - SVE HEAT EXCHANGER
1600 - VAPOR-PHASE CARBON
1900 - OXIDIZER
2200 - AIR SPARGE
2500 - SPARGE HEAT EXCHANGER
2800 - SPARGE OUTLET MANIFOLD
3100 - AIR COMPRESSOR
3400 - COMPRESSED-AIR OUTLET MANIFOLD
3700 - PNEUMATIC WELL PUMPS
4000 - SUBMERSIBLE WELL PUMPS
4300 - SURFACE-MOUNT WELL PUMPS
4600 - GROUNDWATER INLET MANIFOLD
4900 - OIL/WATER SEPARATOR
5200 - PRODUCT STORAGE TANK
5500 - INLET TANK
5800 - UPSTREAM BAG FILTER
6100 - CHEMICAL INJECTION
6400 - AIR STRIPPER
6700 - PRE-CARBON BAG FILTER
7000 - LIQUID-PHASE CARBON
7100 - PRE-MEDIA BAG FILTER
7200 - ACTIVATED ALUMINA
7300 - DISCHARGE TANK
7400 - POST-TREATMENT BAG FILTER
7600 - REINJECTION
7900 - BUILDING,TRAILER OR SKID
8200 - CONTROL PANEL
8500 - ELECTRICAL PARTS
9900 - EXTRAS

E337697-PM403-50-031-0006

PIPING DETAILS:
- WATER FLOW METERS: PROVIDE 10 DIA. OF STRAIGHT PIPE BEFORE AND 5 DIA. OF STRAIGHT PIPE AFTER METERS. ENSURE THAT THROTTLING VALVES ARE NOT DIRECTLY IN LINE WITH METERS.
- AIR FLOW METERS: PROVIDE 8 DIA. OF STRAIGHT PIPE BEFORE AND 3 DIA. OF STRAIGHT PIPE AFTER METERS, IF POSSIBLE. AVOID TEES AND ELBOWS BEFORE AND AFTER METERS.
- MATERIALS OF VALVES AND FITTINGS TO BE THE SAME AS THE DESCRIPTION AT THE LINE. IF THERE IS A TRANSITION FROM PVC TO STEEL, THE VALVE SHOULD BE BRASS.
- THERE ARE NO SPECIAL PIPING REQUIREMENTS OTHER THAN WHAT IS EXPLAINED ON THE DIAGRAM.
- WHEN PVC HOSE IS SPECIFIED, ALWAYS USE VACUUM HOSE; USE GREEN HOSE FOR PRESSURES LESS THAN 60PSI; USE TANK TRUCK HOSE FOR PRESSURES BETWEEN 60PSI AND 150PSI.
- PVC PIPE MAY BE SUBSTITUTED WITH EQUAL-SIZED PVC HOSE WHERE A FLEXIBLE CONNECTION IS PREFERRED.

LEVEL	DATE	BY	REVISION
A	SEPT. 13 2011	MH	FOR REVIEW

HATCH™
H337697 Mary River Project
Oily Water Treatment System

REGISTERED PROFESSIONAL ENGINEER J.V. CASSON LICENSEE NT/NU Oct 6/11

DWG. NO: 101002-01 (PAGE 3 OF 3)
TITLE: PROCESS & INSTRUMENTATION DRAWING
CUSTOMER: CHEMICAL WATER TREATMENT SYSTEM STEENSBY PORT WWTP BAFFINLAND
FILTER INNOVATIONS INC.